1. COURSE TITLE: STATISTICS 104: Elementary Statistics (3 credits)


- Instructor: Dr. H. Smikle
- Office: MS 219
- Telephone: 860 225-1295
- E-mail: smikleh@ccsu.edu
- Office Hours: Tuesday – Thursday 3:30– 5:00 PM
  - Others by appointment
- Class Meeting Times: Tuesdays & Thursdays 5:55 – 7:10 pm
- Classroom: Online
- Technology Use: TI-84 plus or TI-83 plus
- Excel computer software.

111. Students for Whom the course is intended: Stat 104 is intended for students who wish to become familiar with the methods of descriptive and inferential statistics. The credits earned from the completion of Stat104 can be used towards General Education Skill Area 11. It is a part of the following major programs: Criminology, economics, General Science, Physical Education, Electronics Technology, Industrial Technology, and Technology and Engineering Education.

IV: Basic Goals:

The major objectives of the course are:

i) To introduce students to the methods of collecting, analyzing, displaying and the interpretation of data.

ii) The understanding and the interpretation of inferential statistics.

V: Pre- requisites: Students should have received a grade of C- or higher in Math 101 or is placed in the course through the placement examination.

No credit will be given to students with credits for Stat 108, 299, 215, 314, or 315 (Skill area 11).

Topics Covered:

The concepts of the course fall into three sections

Part A: Descriptive Statistics (Chapters 1-4)

- An introduction to the important definitions and terms used in statistics.
- Descriptive statistics (Quantitative and Qualitative data)
- Summarizing data using graphs, tables and charts
- Descriptive data? Numerically
- Describing the relationship between two variables
Part B: Probability and Probability Distributions (Chapter 5-6)

- Combining Events
- Combining Probability
- Counting Methods
- Random variables and The Normal Distribution

Part C: Statistical Inferences (Chapters 7-9)

- Sampling Distributions
- Confidence Intervals
- Hypothesis Testing

COURSE REQUIREMENTS

Attendance: a) Students are expected to attend and participate in class discussion
   b) Complete all homework Assignments
   c) Take tests and quizzes at the scheduled times

The expectation for any college course is that you put at least two (2) hours of study outside of class for every hour of in class contact.

Please inform me of any planned absences (You are responsible for work missed)

Please inform me if you arrive late for class. I am required to report attendance.

You are required to remain for the duration of the class (Please inform me if you need to leave early)

I Reserve the right to ask for documentation of absences.

Netiquette rules for class

1. Set up a quiet space for class; eliminate distractions.
2. Turn off mike. Turn only when you want to speak.
3. Think before you write.
4. Write clearly.
5. Write your questions in the chat
6. Ask a specific question.
7. Use appropriate language and tone
8. Do not use the chat for personal conversation

UNIVERSITY POLICIES

1. You must take the FINAL EXAM at the time specified in the course selection book. The Final Exam for Tuesdays and Thursdays is Thursday May 13. 5:30 – 7:30 PM
2. Please contact me privately to discuss your specific needs. If you need course adaptations because of a disability, medical condition or if you have medical information to share. I will need a copy of the accommodation letter from Student Disability Services in order to arrange your class accommodations. Please contact Student Disability Services if you are not already
registered with them, Student Disability Services maintains the confidential documentation of your disability and assists you in coordinating reasonable accommodations with your faculty.

3. In the event of weather emergency which causes a curtailment or cancellation of classes, listen to WTIC(1080 AM) or call 860 832-3333 for general snow message.

4. The last day to withdraw from this class without permission is April 19th. It is strongly recommended that students consult with their academic advisors prior to deciding to withdraw. Cessation of attendance, notice to the instructor, telephone calls to the Enrollment Center are not considered official notice of a student’s intention to drop the course. After April 19th withdrawals are allowed only under extenuating circumstances and will require the approval of the course instructor, the department chair and the Dean of Arts and Sciences. Poor academic performance is not considered an extenuating circumstance.

5. You are responsible for understanding and abiding by the University's policy on academic integrity. Information for the policy may be found at [http://www.ccsu.edu/academicIntegrity/](http://www.ccsu.edu/academicIntegrity/). This policy is rigorously enforced by the Department of Mathematical Sciences.

6. Central Connecticut State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon age; ancestry; color, gender; identity; and expression; intellectual disability; learning disability; mental disorder; physical disability; marital status; national origin; race; religious creed, sex (including pregnancy, gender identity and expression, sexual orientation); sexual harassment and sexual assault); sexual orientation; or any other status protected by federal and state laws. Any student who has concerns about this should contact the Office of Diversity and Equity (ODE) at 860-832-1652, Student Affairs at 860 832-1601 or his/her faculty member.

7. Central Connecticut State University (CCSU) will not tolerate sexual misconduct against students; staff; faculty or visitors in any form, including but not limited to sexual assault; sexual exploitation; sexual harassment; or stalking as defined in CCSU policies. For additional information please consult the CCSU policies at [http://www.ccsu.edu/diversity/policies/index.html](http://www.ccsu.edu/diversity/policies/index.html).

8. To file a report, contact Diversity & Equity (860-832-1652) Student Affairs (860-832-1601), Student Conduct (860-832-1667) or the University Police 860-832-2375.

9. For Support Advocacy, contact Office of Victim Advocacy at 860 832 3795; or sarahdodd@ccsu.edu, Student Wellness Services at 860-832-1945 (confidential). The Women’s Center at 860-832-1655, the Local YWCA’s sexual Assault Crisis Services Hotline at 860-223-1787. Confidential and Prudence Crandall Center for Domestic Violence (confidential) at 888-774-2900 (24 hr. hotline).

10. All faculty members and staff have a duty to report incidences of sexual harassment including sexual misconduct intimate partner violence and stalking to Rosa Rodriguez, Title IX officer, Office of Diversity & Equity Davidson Hall 102 ph. 860-832-1653.

**RESOURCES AVAILABLE**

- If you need help, take advantage of the office hours. Do not wait for the last minute or just before the test to do so.
- The Learning Center is online. Free tutoring is available. A schedule of hours will be posted soon after the beginning of the semester.
- A list of private tutors for hire is available in the Math Department MS ph. 860 832-2335.
**COURSE EVALUATION**

The following are the tools to evaluate the course

- Homework / Hand-in Assignment
- In Class Tests
- Project
- Final Exam

The grade for the course will be based on the following weights:

a) 75% of all course work (Homework, (Hand in Assignments), In class tests, Project)

b) 25% Final Exam

A total of 3-5 graded assignments will be given. Hand In assignments will be due on the dates announced. There will be 3 in class tests. All tests will be cumulative. Test dates will be announced. Each student will be responsible for all material covered during any absences. Office hours will be used to answer specific questions not to re-teach a lesson or to complete the assignment.

**IMPORTANT DATES:**

February 12- 15: President’s Day

Final EXAM Week: May 10 -18

Final EXAM for this class: Thursday May 13, 5:30 – 7: 30PM.

Last Day to withdraw: April 19

Semester Ends: May 31st.

**CLASS AGENDA**

1. Problem Homework
2. New Lesson
3. Homework Issues
4. New Homework assigned.

**Suggested Course OUTLINE**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Possible Topics</th>
<th>Reading/ Homework Assignment. (odd numbered questions)</th>
</tr>
</thead>
</table>
| 1. 01/26 | Introduction
           The Definition of Statistics Elements, variables, observations. Types of variables | Chapter1.1, 1.2 1.3                                     |
<p>| 2. 01/28 | Descriptive Statistics Frequency Distributions      | 2.1.2.2                                                |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapter(s)</th>
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<tbody>
<tr>
<td>3. 02/02</td>
<td>Descriptive Statistics Quantitative Data</td>
<td>2.3</td>
</tr>
<tr>
<td>4. 02/04</td>
<td>Measures of Center Measures of Variability Hand in # 1</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>5. 02/09</td>
<td>Working with grouped Data Mean, variance &amp; Standard deviation.</td>
<td>3.3</td>
</tr>
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<td>6. 02/11</td>
<td>Measures of Position</td>
<td>3.4</td>
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<tr>
<td>7. 02/16</td>
<td>Chebyshev’s Theorem &amp; Empirical Rule</td>
<td>3.5</td>
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<tr>
<td>8. 02/18</td>
<td>Five number summary Hand in Assignment #2</td>
<td>3.6 Test Chapters #1: 1, 2, 3</td>
</tr>
<tr>
<td>9. 02/23</td>
<td>Relationship between two variables. The Scatterplot Correlation</td>
<td>Chapter 4.1, 4.2</td>
</tr>
<tr>
<td>10. 02/25</td>
<td>Regression Equation of the Least square regression line</td>
<td>4.3</td>
</tr>
<tr>
<td>11. 03/02</td>
<td>Regression Equation of the regression line (Contd.)</td>
<td>4.3 Hand-in Assignment #3</td>
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<tr>
<td>12. 03/04</td>
<td>Probability (introduction) Classical Probability Relative Frequency</td>
<td>Chapter 5.1</td>
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<tr>
<td>13. 03/09</td>
<td>Combining Events Union and addition</td>
<td>5.2</td>
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<td>14. 03/11</td>
<td>Conditional Probability</td>
<td>5.3</td>
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<tr>
<td>15. 03/16</td>
<td>Multiplication Rules. Counting Methods Permutation and Combinations.</td>
<td>5.3 &amp; 5.4 Hand in Assignment #3</td>
</tr>
<tr>
<td>16. 03/18</td>
<td>Random Variables Discrete Probability Distributions</td>
<td>Chapter 6.1</td>
</tr>
<tr>
<td>17. 03/23</td>
<td>Binomial Probability Distribution</td>
<td>6.2</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Chapter(s)</td>
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<tr>
<td>18. 03/25</td>
<td>Poisson Probability Distribution</td>
<td>6.3 Hand in Assignment #4A</td>
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<tr>
<td>19. 03/30</td>
<td>The Normal Probability Distribution</td>
<td>6.4</td>
</tr>
<tr>
<td>20. 04/01</td>
<td>Application of the Normal Distribution</td>
<td>6.5 Hand in Assignment #4B</td>
</tr>
<tr>
<td>21. 04/06</td>
<td>Sampling Distribution</td>
<td>Chapter 7.1</td>
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<tr>
<td></td>
<td>The Central Limit Theorem Means</td>
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<td>22. 04/08</td>
<td>Finding the probability using Sampling Distributions.</td>
<td>Chapter 7.1</td>
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<td>Sampling distribution for proportion.</td>
<td>Chapter 7.2</td>
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<tr>
<td>23. 04/13</td>
<td>Confidence Intervals large samples. Z intervals for</td>
<td>Chapter 8.1</td>
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<td>population Mean</td>
<td>8.2</td>
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<tr>
<td>24. 04/15</td>
<td>Confidence intervals small samples/ t interval for</td>
<td>Chapter 8.2</td>
</tr>
<tr>
<td></td>
<td>population mean</td>
<td>Test #3 Chapter 6,7,8</td>
</tr>
<tr>
<td>25. 04/20</td>
<td>Z interval population proportions.</td>
<td>Chapter 8.3</td>
</tr>
<tr>
<td>26. 04/22</td>
<td>Hypothesis Test</td>
<td>9.1 – 9.2</td>
</tr>
<tr>
<td>27. 04/27</td>
<td>Hypothesis test</td>
<td></td>
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<tr>
<td>28. 04/29</td>
<td>Hypothesis Test Contd.</td>
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<tr>
<td>29. 05/04</td>
<td>Catch up Review</td>
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<tr>
<td>30. 05/06</td>
<td>Catch up</td>
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FINAL EXAM MAY 13th